

GEOM. ch. 8.4 p. 427

#5 3 points

GIVEN: REGULAR NONAGON $n=9$

$$a = 9.6 \text{ cm}; \quad A = 302.4 \text{ cm}^2$$

FIND: P - ?

$$A = \frac{1}{2} a s n$$

$$302.4 = \frac{1}{2} \cdot 9.6 \cdot s \cdot 9$$

$$302.4 = 4.8 \cdot s \cdot 9$$

$$302.4 = 43.2 s$$

$$\begin{array}{r} \text{-----} \\ 43.2 \end{array} \quad \begin{array}{r} \text{-----} \\ 43.2 \end{array}$$

$$s = 7$$

$$P = s \cdot n = 7 \cdot 9 = \underline{63 \text{ cm}}$$

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#7 3 points

GIVEN: $a = 9\text{ m}$, $A = 259.2\text{ m}^2$

FIND: $P = ?$

$$A = \frac{1}{2} a s n$$

$$259.2 = 0.5 \cdot 9 \cdot s \cdot n$$

$$259.2 = 4.5 s n$$

$$\begin{array}{cc} \text{-----} & \text{-----} \\ 4.5 & 4.5 \end{array}$$

$$57.6 = s \cdot n$$

$$s \cdot n = P$$

$$\underline{P = 57.6\text{ m}}$$

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#8 3 points

GIVEN: $q = 80 \text{ ft}$; $n = 20$;
 $A = 20,000 \text{ ft}^2$

FIND: $S = ?$

$$A = \frac{1}{2} q \cdot S \cdot n$$

$$20,000 = 0.5 \cdot 80 \cdot S \cdot 20$$

$$20,000 = 40 \cdot S \cdot 20$$

$$20,000 = 800 S$$

$$\begin{array}{r} \text{-----} \\ 800 \end{array} \quad \begin{array}{r} \text{-----} \\ 800 \end{array}$$

$$\underline{S = 25 \text{ ft}}$$